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FROM BUREAUCRATIC LANGUAGE TO INSTRUCTIONAL TEXTS:  
HOW TO DESIGN AN EFFECTIVE PROBLEM-SOLVING TOOL FOR CITIZENS

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Introduction

A few years ago, the Dutch government devised a regulation providing a supplementary benefit for people who have to live on a minimum income. Every year since, the Ministry of Social Affairs conducted a large publicity campaign to inform the people concerned with this regulation. In 1984, a Dutch research institute investigated whether the 1983 campaign had been succesful (Nederlandse Stichting voor Statistiek, 1984). The results indicated that about 90% of those concerned were aware of the existence of the regulation. At first glance, this may seem a quite satisfactory result. Further analysis of the data revealed, however, that 44% of the respondents entitled to the benefit erroneously had not applied for it. They had not realized that they themselves were entitled to the benefit. Despite these outcomes, the Undersecretary for Social Affairs denied in the Dutch Parliament that this should be a serious problem, and even if so, he said, not very much could have been done about it: complex regulations inevitably entail complex information texts.

Stories like these can undoubtedly be told regarding most western welfare states. Substantial groups of citizens have only a global awareness of social laws and regulations, and do not know how to obtain the benefits they are entitled to. Usually, those people who need the benefits most, have the greatest problems understanding the regulations. This unbalanced distribution of 'bureaucratic competence' (Gordon 1975) discloses a paradox of welfare society: social legislation is meant to create sufficient well-being for everyone, but in fact it tends to favour only a relatively small group: those with sufficient bureaucratic competence (Bruinsma, 1980; Thomassen, 1981, Jansen & Steehouder, 1984). Of course, legal and bureaucratic language are not the only obstacles, but it seems clear that language plays a certain role in the many problems that arise in service-delivery policies.

In this paper we will sketch some aspects of the reform of legal and bureaucratic language in the Netherlands. We will also give an overview of some research on bureaucratic texts we are conducting at the moment. We will try to clarify the



problems people experience reading public documents, to find criteria for improvement of these documents, and to develop a design procedure for this kind of documents. At the end of our paper, we will draw some conclusions that hopefully will contribute to a fruitful discussion.

## 1 The reform of legal and bureaucratic language in the Netherlands

In this paper, we will use the term legal texts (or legal language) to refer to those documents that form part of legislation: laws, regulations, wills, decrees etcetera. With the term bureaucratic texts (or language) on the other hand, we refer to documents which emanate from government agencies and which play a part in the execution of laws: brochures, leaflets, guidelines, forms and other explanatory materials issued by government agencies (cf. Charrow 1981).

### 1.1 Legal texts

How is the legal language problem dealt with in the Netherlands? To give an impression, we can, after Ruiter (1984), make a distinction between the text of the law and the content of the law, analogous to the linguistic distinction between signifiant and signifie. To clarify this distinction, Ruiter uses a technical metaphor. The text of the law can be compared with a technical specification of a new machine. The content of the law, in other words: the legal status (norms, rights and duties) created by it, can be regarded as a machine. Like in technology, a legal specification can never be more intelligible than the construction of the system allows for.

Should, then, legislation be simplified? With respect to this issue, two different tendencies can be observed in the Netherlands. On the one hand, the Dutch government has a policy to deregulate as much as possible. On the other hand, the increasing complexity of modern welfare society is inevitably leading to more, and more complex, regulation and legislation. As the ultimate result, especially in the field of social security, complexity of the content of legislation tends to increase rather than to decrease.

Given this increasing complexity of the content of the law, what can be done to improve, or at least not to diminish, the intelligibility of the text of the law? We must admit that in the Netherlands little attention has been paid to this issue. Most jurists, when writing about the subject, confine themselves to incidental observations and complaints, while Dutch linguists show hardly any interest at all in the matter.

The same goes for Dutch government. Not very much has been done to increase the intelligibility of legal texts. In 1984, true enough, a series of 153 directions for the technique of legislation was published, and the greater part of these



directions concern the use of language (vocabulary, syntax, structure of the text). The main goal of this publication however, was to increase uniformity and correctness, and not to increase intelligibility. The only directions which, indirectly, may affect intelligibility, are those against archaisms.

Civil servants involved in preparing law texts are not obliged to observe these directions, and there is no official or systematic control procedure to ensure that they do. In our opinion, the ultimate effect of the directions on the intelligibility of the law texts is close to nil.

In conclusion we must state that legal language reform is a very underexposed issue in the Netherlands. Fortunately, bureaucratic language reform draws more attention from government and linguists.

## 1.2 Bureaucratic texts

It is communis opinio that citizens must be informed about the content of laws, regulations, decrees etcetera. To achieve this goal, Dutch government produces a stream of bureaucratic texts. To characterize the function of these texts, let us continue Ruiter's technical metaphor. Consumers who buy technical equipment like a stereo receiver or a personal computer are usually not interested in a detailed specification. What they want is perhaps a relatively short and simple explanation of the main principles of the apparatus, and above all a manual that tells how to use it.

The same holds true for the law. Citizens usually are not interested in the law per se. They may want to be informed about the main principles, but above all they are interested in the practical consequences of the law for themselves and their families.

In the Netherlands, many efforts are undertaken to inform people about laws and regulations, about their rights and duties, and about the way they have to act to obtain their rights. The most important measures can be listed as follows:

1

The 'Wet op de Openbaarheid' (Publicity Act) forces the government to supply information about actual or intended policy. Article 2 of the act states that government agencies have to give this information in a comprehensible format.

The importance of this act is primarily that it provides a legal basis for the striving for more comprehensible information. Yet we have our doubts about the actual effect. Firstly, the act does not state what exactly is meant by 'comprehensible', and secondly, the act does not provide for procedures allowing the citizen to force the government into supplying their information in a comprehensible format.



Many government agencies have a specialized information department which produces brochures, leaflets and other bureaucratic texts for citizens. More and more communication officers are involved in these departments. Most of them have acquired their professional experience in civil service, public relations or journalism.

There is a growing interest in language and writing abilities in the schooling of civil servants. A course in composition and style is nowadays a regular part of the training program, and refresher courses are organized by several private institutions. As a result of this interest, several handbooks have been published in which guidelines are given on how to write readable bureaucratic texts (Renkema 1979; Jonker & Van den Hoven 1983).

It is hard to tell whether these measures have any positive effect at all. We do not know of any Dutch research on the effect of linguistic training of civil servants on the quality of the bureaucratic texts they produce. But frankly, we are not very optimistic. Until now, the complaints about the language of the bureaucracy have not decreased. Perhaps, more time will have to pass before effects will be seen. But we think the work of professional communicators needs the support of linguistic theory and research.

Our contribution to the research conducted in this field so far concerns one specific type of bureaucratic texts, the instructional bureaucratic text. To illustrate what we mean by this term, we return to the metaphor of the technical equipment. Information about technical equipment, directed to laymen, can be general explanatory information about the construction, the working and the main principles behind it; it can also consist of instructions on how to use the machine. By analogy, a distinction can be made between

- explanatory bureaucratic texts, giving information about the main principles of a law or regulation, and intended for those who are interested in the law 'per se' and the government policy behind it; and
- instructional bureaucratic texts, informing readers about how they and their families stand in relation to the law or regulation.

## The design of effective instructional texts

Instructional bureaucratic texts are the subject of our research. We focus on three main questions:

- 1 What are the problems ordinary citizens meet when reading instructional bureaucratic texts?
- 2 What do optimal instructional bureaucratic texts look like?
- 3 What is an optimal procedure for writing such a text?



## 2.1 Problems in using instructional bureaucratic texts

The main goal of instructional bureaucratic texts in the field of social security is to help people to identify their rights and to obtain these rights. What problems can arise while people read such a text? To make an inventory, we need a model of the information-seeking behaviour of citizens. We use a provisional model, based upon the model Kern developed for the use of manuals during performance on the job site (Kern 1985). In our model, the information-seeking process consists of the following steps:

- 1 Recognizing the need for information
- 2 Formulating a question
- 3 Identifying a likely source
- 4 Locating the source (instructional text)
- 5 Searching the text for information responsive to question
- 6 Evaluating the information
- 7 Applying for the benefit (rebate)

Problems can arise in all steps of this model, and many of them have been reported in Dutch literature (Filet 1974; Thomassen 1979). We will confine ourselves here to the problems at step 5, since at this step the nature of the problems is primarily a linguistic one. For the moment, we will assume

- that the reader of a text has recognized that the information in the text might be important to him/her;
- that the reader formulated questions like 'Does this regulation apply to me, and if so, what am I entitled to and what do I have to do?';
- that the reader preferred to seek the information in the brochure, and not to ask a neighbour, a civil servant or another helpful person;

Now, what can go wrong when readers try to find the answer to their questions in the text? To give an impression of the kind of problems such readers will meet, we summarize some of our findings in a thinking aloud experiment (Steehouder & Jansen 1984). We asked ten subjects to read a public leaflet on Rent Rebate Grants, issued by the Ministry of Housing. The subjects were told to imagine that they were in the position of an imaginary Mr. De Vries, as described in the instructions. The task we gave the subjects was:

- using the leaflet, determine the exact amount of Rent Rebate Mr. De Vries should receive;
- in doing so, continually try to speak out what you are thinking.

The verbalizations of the subjects were recorded on tape and were written out in protocols. Analysis revealed one central problem: the subjects tended to read their text in a global, rather than in a precise manner. Their reading strategy was appropriate for an explanatory, but not for an instructional text. The following observations may illustrate this point:



1 None of the subjects dared to skip irrelevant text passages. Even when they realized that a certain passage was unconnected to the situation of Mr. De Vries, they could not decide to leave it unread.

2 Sometimes subjects acted too late. When according to the text a certain action (for instance calculating a sum of money) would be appropriate, subjects often postponed such an action until they really could not proceed without the result of the action. At that time they did not remember exactly what to do, did not reread the relevant passage, and consequently made mistakes.

3 On other occasions, subjects acted too early. Sometimes they encountered a certain phrase in the text, thought that they understood exactly what was meant, and acted accordingly. Alas. Had they continued reading, they would have found that their hypothesis was not correct. For instance, one of our subjects read the phrase 'income', thought it meant 'total income of Mr. and Mrs. De Vries', calculated the sum and found out a few seconds later that she had worked in vain. In this particular regulation, only the income of the husband was relevant. To 'kick and rush' may be an adequate soccer strategy, in reading instructional texts it doesn't always work out very well.

Looking at an ordinary Dutch leaflet, such behaviour is not very surprising. The leaflets hardly give any indication that they are meant for solving concrete problems. They are supposed to function as instructional texts, but they are written as explanatory texts.

This takes us to the second question in our research: what does an optimal instructional bureaucratic text look like?

## 2.2 Principles for instructional bureaucratic texts

Why do people read bureaucratic texts? As explained, we assume that most people are not so much interested in the law per se, but are looking for an answer to the question 'what does this law mean to me and my family?' They are looking for instructions to help them decide whether or not they are entitled to some benefit, and if so what they have to do. Looking for answers to questions like these, citizens are best helped by a text that prescribes a straightforward course of actions. How to write such a text? It seems advantageous to apply a number of guidelines and principles that have proved to be useful for other instructional texts, like technical manuals. We mention some of them here:

- 1 Stressing the instructional character of the text  
The first impression people get of the character of a text determines which reading strategy they are going to follow. An instructional text should give strong indications that it is meant for problem-solving. Good suggestions are for instance: providing reading advices in an introductory passage, writing in a direct,



personal style and using questions and imperatives instead of declarative sentences.

- 2     Writing according to the scenario principle  
Flower, Hayes & Swarts (1983) state that writers should structure information around human agents performing actions in particularized situations. This way, they create a 'reader-based' structure of information: the presentation in the text is congruent with the cognitive strategies readers bring to it.
- 3     Providing step-by-step instructions  
In order to prevent readers from following a kick-and-rush strategy, it is recommendable to give instructions step by step, and preferably in the most efficient order (we will return to this issue in section 2.3).
- 4     Listing the conditionals separately  
One of the most striking difficulties in reading instructional texts is the verification of complex conditionals. What is expected of a reader confronted with a passage like: 'If you are married or over sixty-five and all of your children are born after 1950, then you must fill in form B12, unless you already filled in form A32 or (one of) your children is married too'? Research summarized in Felker e.a. (1981) reveals two possible effective ways to separate conditions: putting the conditions in a vertical list and using a flow chart.
- 5     General principles of structured writing  
The concept of 'structured writing' covers a broad series of principles which can be found in the literature about functional texts (e.g. Hartley 1977; Hartley 1980; Horn 1985). Among these principles are: visible structure, pre-divided information, labeling, consistency of format, integration of graphics, overviews.
- 6     Using simple language at the lexical and syntactic level  
It seems hardly necessary to motivate this measure here. Readability research has resulted in a large number of guidelines on style, sentence length and type, and word choice, which can be found in many handbooks on this subject.

On several occasions we have had the opportunity to apply these principles in designing and revising public documents in the Netherlands. For instance, in 1981 we revised a leaflet on Rent Rebate Grants, published by the Ministry of Housing; in 1984 we took part in the design of a form and an accompanying leaflet on a supplementary benefit for citizens in the lowest income class. From this work two desiderata emerged.



Firstly, we felt the necessity of more elaborated guidelines. Most of the principles are quite general, and have been developed in the context of education or technical manuals. Until now, they have seldom been used for texts explaining complex laws and regulations, at least in our country. Integration of these guidelines in a method that provides a systematic approach to the problem as a whole would be most preferable. Information Mapping, as described by Horn (1976, 1985) seems a useful starting point for such a method.

Secondly, we felt a lack of empirical evidence on the supposed effectiveness of using 'our' principles. Of course, most of them have been tested, but separately and in a different context. How they affect reader behaviour when they are interacting in a bureaucratic text is not very clear yet, to put it mildly. In our 1981 research we did find significant improvement of reader performance, when people were confronted with a revised text version, but which of our interventions accounted for which part of the effect could not be determined. Only a more qualitative kind of research could provide answers to this question.

### 2.3 A procedure for designing instructional bureaucratic texts

To achieve improvements in text writing, we need to know more about the principles that characterize effective texts. But this is not sufficient. It is also necessary to know the most effective and efficient text design procedure. In literature several models for a design procedure are discussed (Van Woerkum 1982; Duffy 1981; Felker 1980). Essential steps in these models are:

- 1 Analysis of reader needs (problems)
- 2 Analysis of the content
- 3 Design of first draft
- 4 Pretesting
- 5 Revision
- 6 Production and distribution
- 7 Evaluation

We will confine ourselves to step 2 here; in this step the document designer is pre-eminently confronted with the problems in both legal and bureaucratic language.

Most writers of Dutch instructional bureaucratic texts seem to think that the content of such a text is essentially the same as that of the legal text on which it is based: general norms, rights and duties. Most bureaucratic texts can be characterized as more or less simplified descriptions of this legal status.

In our view however, it is better to think of the content of an instructional bureaucratic text as a course of actions the intended readers have to perform (cf. Harris, 1983). An argument for this thesis can be found in reader behaviour. Even when confronted with a text that has been written from



an 'explanatory' point of view, readers try to 'translate' the information into actions (Flower, Hayes & Swarts 1983). When the translating is done by the writer, the readers are freed from this extra cognitive burden and they can save their energy for the actual problem-solving process.

As a basis for an instructional bureaucratic text, the writer needs a detailed inventory of the actions the readers have to perform to solve their problem. Step 2 in our procedure ('analysis of the content') can be specified as follows: starting with the legal text, infer what course of actions must be undertaken by the readers to answer their questions.

This asks for two different design activities: firstly, the individual reader actions must be deduced; secondly, the most effective and efficient order of these actions must be determined.

### 2.3.1 Deduction of reader actions

Frequently, the most important operations are verifications: the reader has to decide whether a given qualification applies to his or her situation ('Are you married?'). These verifications can be found in the text of the law in

- conditionals: "If the person is married, and...., then...."
- definitions: "In this law a tenant is he who ...."
- adjective phrases: "The benefit is granted to the tenant whose income ..."

In order to transform the original legal text into instructions for the reader, the first step to be taken is to identify all relevant conditions, and to rephrase them into simple questions. In practice the latter will not be a serious problem. Finding the conditionals, however, is often a much more difficult task. Two strategies can be applied:

- A 'top down strategy': firstly, the essential steps must be identified, then each step must be split up into two or more substeps, and so on, until all conditionals are covered.
- A 'bottom up strategy': firstly, the different parts and sections of the legal text must be analysed and transformed into parts of the total course of actions; then they have to be 'pasted' together.

To ensure that all readers will be able to perform each individual action without great problems, it may be necessary to split up instructions into more detailed instructions, or to replace given instructions by new instructions which lead to the same results. For example, a question like:

"Is your income, increased with 10 % , under Dfl.  
40.000?"

can be split up into:



- 1 Determine your income
- 2 Add 10 %
- 3 Is this sum under Dfl. 40,000?

The original question can also be replaced by a question like:

"Is your income under Dfl. 36,363.64?"

At first glance, this may look a bit more difficult; in fact it is a lot simpler than the original question.

### 2.3.2 Determination of the most efficient order

To guarantee a maximum efficiency of the instructional text, it must be ensured that every individual citizen reads and performs only those instructions that are needed in his or her individual situation.

A method for achieving this, has been published by MacDaniel (1968) and Wheatley & Unwin (1972). The basic steps are the following:

1. One starts with a set of verifications (binary questions) and a set of outcomes, associated with the answers to these questions. Questions and outcomes are noted down in a decision logic table, for instance as follows (the example stems from Wheatly & Unwin, 1972):

	1	2	3	4	5	6	7	8
Are you a man?	YES	YES	YES	YES	NO	NO	NO	NO
Are you under 25?	YES	YES	NO	NO	YES	YES	NO	NO
Are you married?	YES	NO	YES	NO	YES	NO	YES	NO
Outcomes	B	B	A	A	C	D	C	D

The columns 1, 2, 3 etc. represent different reader groups. For instance, group 1 are the married men under 25, group 2 are the unmarried men under 25, etc. The outcomes A, B, C, and D, represent the amounts of rebate the different groups are entitled to.

2. The next step is to identify pairs of columns: columns which lead to the same outcome and are alike in every respect except that one question is answered differently. In the example column 1 and 2 form a pair: only the answers to the third question are different. This can only mean that the answers to this question are irrelevant to the outcome. In this imaginary regulation, for men under 25 it does not matter if they are married or not: they are all entitled to amount B. Consequently, the answers to the third question in column 1 and 2 can be deleted.

	1	2
Are you a man?	YES	YES
Are you under 25?	YES	YES
Are you married?	<del>YES</del>	<del>NO</del>
Outcomes	B	B

This leaves two identical columns, one of which is superfluous now.

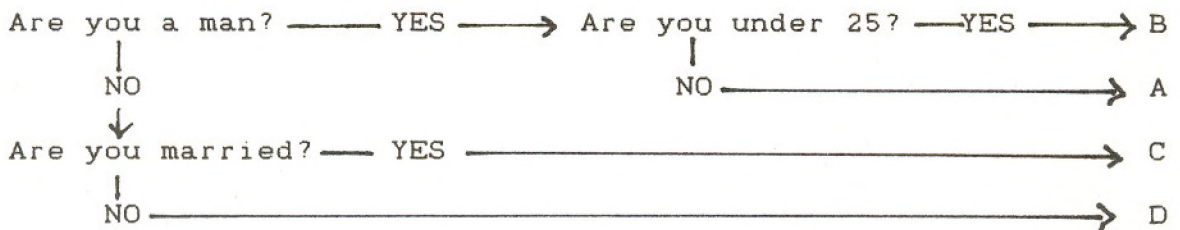
	1	2
Are you a man?	YES	YES
Are you under 25?	YES	YES
Are you married?	<del>YES</del>	<del>NO</del>
Outcomes	B	B

When we repeat this procedure for the other columns, we can effectively reduce the table to four columns only:

	1	3	5	6
Are you a man?	YES	YES	NO	NO
Are you under 25?	YES	NO		
Are you married?			YES	NO
Outcomes	B	A	C	D

Now we are ready to transform the table into a flow chart: a solid base for the ultimate instructional text. Note that there is only one complete row of YES's and NO's running across the table. This means that the question stated in this row always has to be answered. Whether any of the other two questions have to be answered, depends on the answer to the first question. That is why the algorithm has to start with this question.

The course of actions now can be noted as follows:





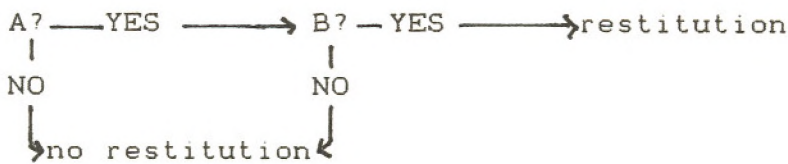
It is important to realize that following this procedure does guarantee that none of the readers will have to answer a question that is irrelevant to his/her situation. In other words: this procedure produces the most effective course of actions to solve the problem of the reader.

However, there may be complications. In some cases it may be impossible to decide which question should be answered first. A very simple example is the following one:

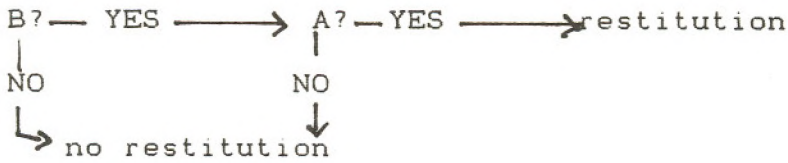
If you are married (A) and the average of your income in the past three years is Dfl. 43,000 or less (B), then you may apply for a restitution of income tax.

In this case two possible courses of action can be constructed:

Possibility 1:



Possibility 2:



Which of these possibilities is the preferable one? To make the right decision, we can follow a procedure developed essentially by Landa (1974).

Both possibilities meet the demand that readers only have to answer those questions which are relevant to their situation. Yet, there is a considerable difference between the two. It may be assumed that answering question B takes more time than answering question A: it is harder to tell if your income exceeds a certain sum than to tell if you are married. To decide then which of the two possible orders is the most efficient one, we need four figures. We need to know the probability that question A will be answered positively ( $p_A$ ), we need to know the possibility of a positive answer for B ( $p_B$ ), and we need to know the average amount of time it will take to answer question A and question B respectively ( $t_A$  and  $t_B$ ).

- $p_A$  = probability of a positive answer to A
- $p_B$  = probability of a positive answer to B
- $t_A$  = average time to answer A
- $t_B$  = average time to answer B

When the values of  $p_A$ ,  $p_B$ ,  $t_A$  and  $t_B$  are known, the average time the readers will need to follow each of the two possible courses of actions can be calculated.

In case 1, all readers have to answer question A; only a part of them ( $p_A$ ) also have to answer B. Thus, the average total amount of time will be:

$$T(1) = t_A + p_A \cdot t_B$$

In case 2, the average total amount of time will be:

$$T(2) = t_B + p_B \cdot t_A$$

Of course, the most efficient possible course of actions will be the one where  $T(x)$  is least. In other words: Case 1 is most efficient if and only if:

$$t_A + p_A \cdot t_B < t_B + p_B \cdot t_A$$

$$\Leftrightarrow t_A - p_B \cdot t_A < t_B - p_A \cdot t_B$$

$$\Leftrightarrow \frac{t_A - p_B \cdot t_A}{t_A \cdot t_B} < \frac{t_B - p_A \cdot t_B}{t_A \cdot t_B} \quad (t_A > 0; t_B > 0)$$

$$\Leftrightarrow \frac{1 - p_B}{t_B} < \frac{1 - p_A}{t_A}$$

$$\Leftrightarrow \frac{1 - p_A}{t_A} > \frac{1 - p_B}{t_B}$$

In other words, given a (part of a) regulation of the form 'if A and B, then outcome C' the most efficient order of instructions begins with the instruction for which is true that:

$$\frac{1 - p}{t} \text{ is maximum.}$$

In the same way, it can be shown that, given a (part of a) regulation of the form 'if A or B, then outcome C' the most efficient order of instructions begins with the instruction for which is true that:

$$\frac{p}{t} \text{ is maximum.}$$

Perhaps this procedure seems too difficult and too complex to be practical. Moreover, in many cases the exact values of  $p$  and  $t$  are unknown. However, it seems possible to construct more practicable guidelines on the basis of the principles underlying this procedure:

1 In many cases it is possible to make a fair estimation of the values of  $p$  and  $t$ ; sometimes only ratios between values will be sufficient.

2 In those cases, simplified procedures and formulas can be used, with which the most efficient order can be approximated.



3 For more complex cases, it should not be hard to develop computer programs that will be helpful in doing the job.

To achieve a real improvement of bureaucratic instructional texts, we feel it is necessary to further develop procedures like those introduced here. On the one hand, they need further detailing and refining, on the other hand they need to be 'translated' into practical guidelines.

A final remark concerning the procedure for designing instructional bureaucratic texts. What holds true for every instructional type of text, holds true for this specific type too: the text can only be as simple as the complexity of the regulation allows for.

Transforming regulations into instructional texts is a task for specialists in the field of instruction. It is a widespread misunderstanding, at least in our country, that any public relations officer or free lance journalist should be capable of producing bureaucratic texts that really help people to find out what their rights and duties are.

### 3 Conclusions and perspectives

1  
Citizens meet problems when they try to use bureaucratic texts to answer their questions. These problems are the result of an inadequate, more or less global and anticipating reading strategy. This strategy seems to be provoked by the character of the text, which frequently is expository instead of instructional.

2  
Bureaucratic texts intended to inform citizens about their rights and duties should be written as instructional texts. There is no reason why principles that are helpful for technical manuals and the like should not work in a bureaucratic setting.

3  
The design of instructional bureaucratic texts is an expert job and should not be left to public relations officers or free lance journalists who have no special training in this kind of work.

4  
For researchers the most important tasks at the moment seem to be:

- to elaborate and test existing and new instructional text principles in order to apply them in the context of bureaucracy
- to develop procedures for designing high-quality instructional bureaucratic texts.

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